



“JavaScript Includes”

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Introduction

ITS uses JavaScript to build the elements that will be common to several pages within an Internet site. In fact, the header, footer, and left navigation of the **eDG site** are all constructed using JavaScript. Constructing pages this way uses a simplified version of the Server Side Include concept. By using “JavaScript Includes,” along with **Cascading Style Sheets** (CSS), entire sites can be updated to reflect a new look quickly and efficiently.

There are probably as many ways to create an include using JavaScript as there are Web developers working for the State. This article presents one simple method that incorporates some of the Dreamweaver 4.0 functionality. Basically, it will go through the steps of using a JavaScript document.write function to create the eDG left navigation in an HTML table.

Note: *This tutorial assumes that you already know what elements you want to make common on your pages. If you need help getting page elements ready, go to ReDG’s **Creating an Interface** tutorial.*

Note: *This article uses code created in Dreamweaver 4.0, but the concepts demonstrated here are not dependent on Dreamweaver. Users could adapt these instructions to work with hand-coded HTML or with other HTML editors.*

Note: *HTML or JavaScript code quoted in this tutorial is displayed in red using the Courier New typeface. For example: **Code**.*

Continued ...






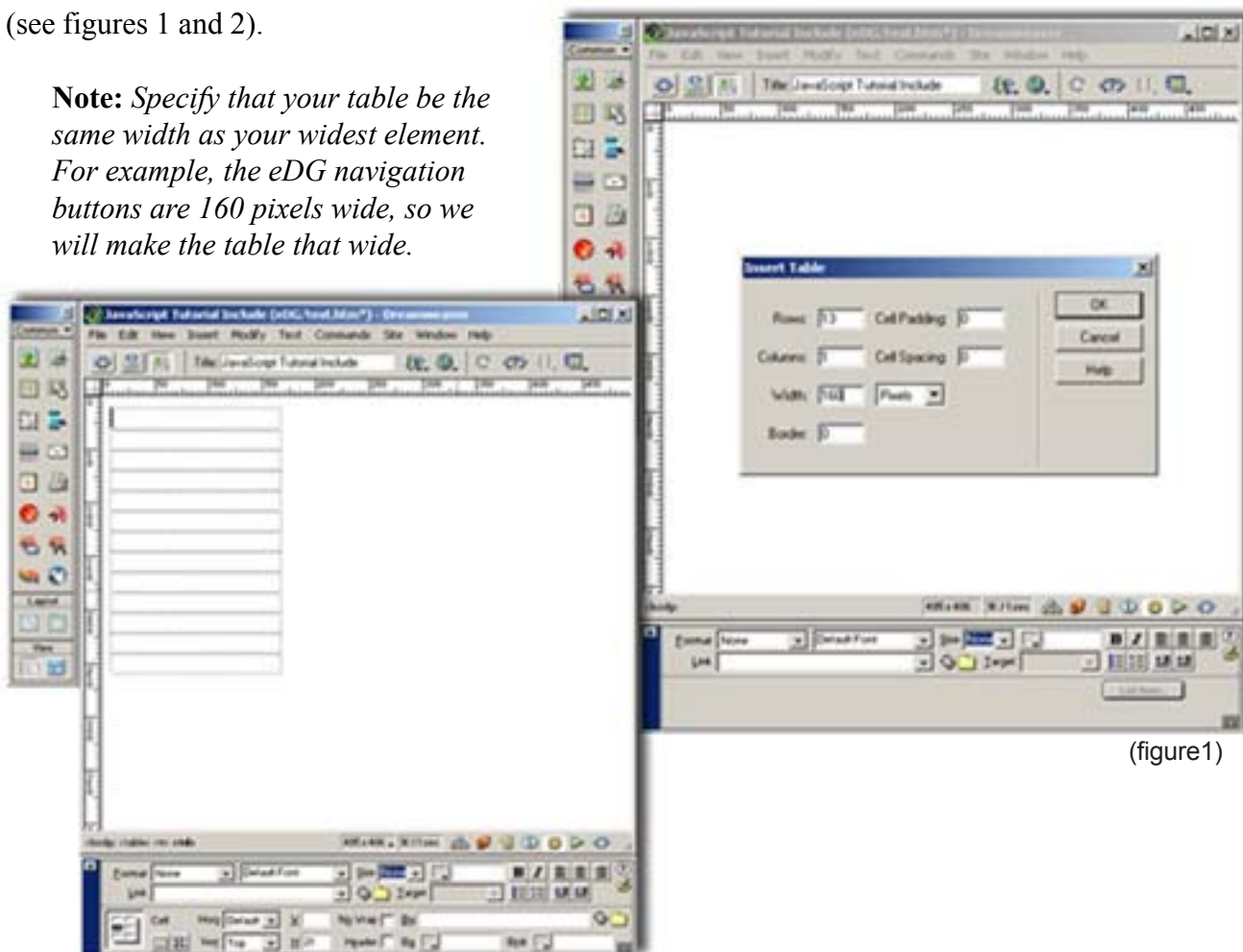
Step 1

1. Create a new HTML file in Dreamweaver.

Note: For the rest of the tutorial, this file will be known as the “table file.”

2. Using the “Insert Table” tool  on Dreamweaver’s Common pallet, create a table with enough cells to hold all the elements you will place in the include. In this case, we need 13 rows and only one column to hold all the eDG elements (see figures 1 and 2).

Note: Specify that your table be the same width as your widest element. For example, the eDG navigation buttons are 160 pixels wide, so we will make the table that wide.



(figure1)


(figure 2)

Continued ...



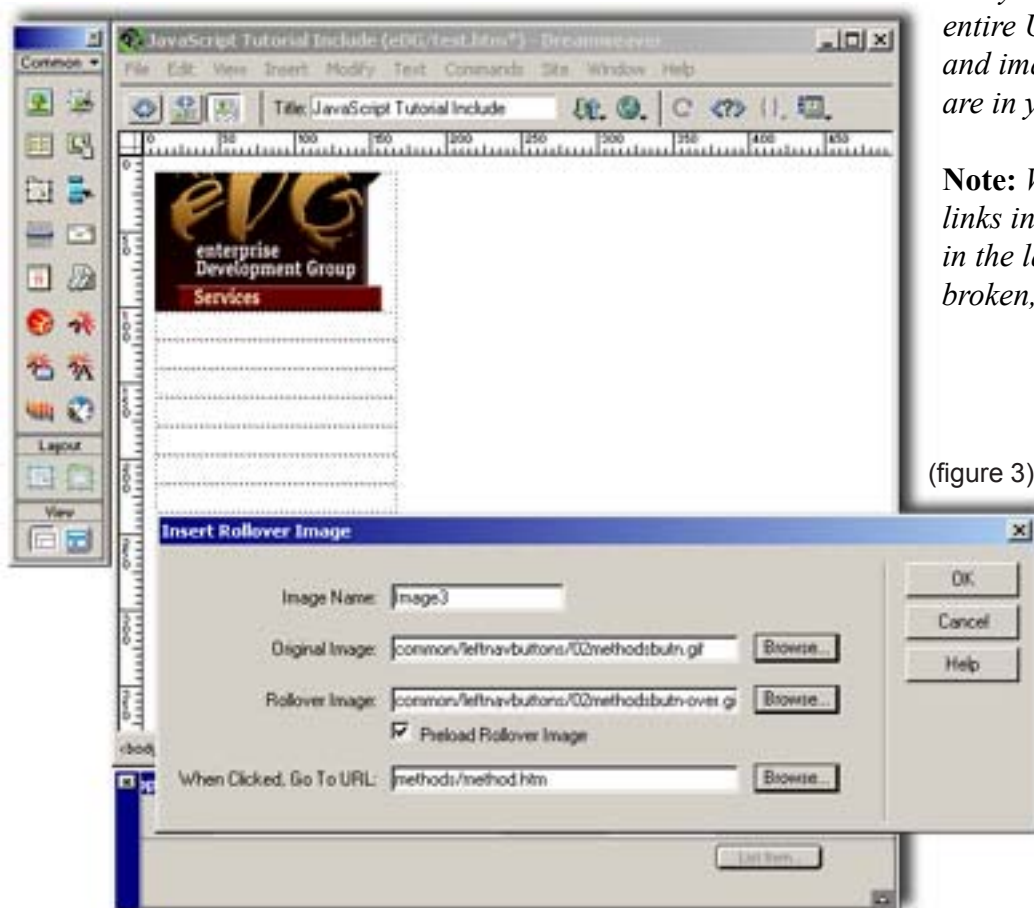


Step 2

1. Begin to fill in the table cells with your page elements (see figure 3). For the sake of simplicity, let Dreamweaver use its own JavaScript functions to do any rollovers. Accomplish this by using the “Insert Rollover  Image” button on Dreamweaver’s Common Pallet.
2. If applicable, add appropriate links to your elements using Dreamweaver’s Properties pallet. Please make sure that all of your links are absolute.

Important Note: *Because the JavaScript include will be used in multiple pages in various directories on a web site, all the hyperlinks and links to images need to be absolute. This means that you need to include the entire URL for all hyperlinks and images, even if the links are in your own site.*

Note: *When you use absolute links in Dreamweaver, images in the layout window will look broken, this is normal.*



(figure 3)

Continued ...





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Step 3

1. When the table is completely filled in, create a new Dreamweaver file and name it using the .js extension. In this example, we will use “edg.js.” This file will be your JavaScript library and will contain the actual `document.write` function that will be your include.

Note: For the rest of this tutorial, this file will be known as the “library” or “JavaScript library.”




(figure 4)

Continued ...





Step 4

For this step, you will need to look at the actual code for the table file and the library. Do this by clicking on the “Show Code View” button  on the top of the file window.

1. Delete everything from the library file so that the window in Code View looks blank.

If you have rollover functions or other Macromedia JavaScript behaviors in your table code, you will notice the Macromedia JavaScript functions listed between the `<head>` and `</head>` tags of the table document. These can include, but are not limited to, `MM_swapImgRestore`, `MM_preloadImages`, `MM_findObj`, and `MM_swapImage`. The `document.write` function will refer to them, so they will need to be copied into the library file.

If you do not have any Macromedia functions in your table file, you can skip the rest of this step.

2. Making sure not to include any `<script>` or `</script>` tags, copy all of the Macromedia functions and paste them into the library (see figure 5).

```
6 <script language="JavaScript">
7 <!--
8 function MM_swapImgRestore() { //v3.0
9   var i,x,a=document.MM_sr; for(i=0;a&&i<a.length&&(x=a[i])&&x.oSrc;
10 }
11
12 function MM_preloadImages() { //v3.0
13   var d=document; if(d.images){ if(!d.MM_p) d.MM_p=new Array();
14     var i,j=d.MM_p.length,a=MM_preloadImages.arguments; for(i=0; i<
15       if (a[i].indexOf("#")!=0){ d.MM_p[j]=new Image; d.MM_p[j++].src=
16 }
17
18 function MM_findObj(n, d) { //v4.0
19   var p,i,x; if(!d) d=document; if((p=n.indexOf("?"))>0&&parent.fra
20     d=parent.frames[n.substring(p+1)].document; n=n.substring(0,p);)
21   if(!(x=d[n])&&d.all) x=d.all[n]; for (i=0;!x&&i<d.forms.length;i++)
22     for(i=0;!x&&d.layers&&i<d.layers.length;i++) x=MM_findObj(n,d.laye
23   if(!x && document.getElementById) x=document.getElementById(n); re
24 )
25
26 function MM_swapImage() { //v3.0
27   var i,j=0,x,a=MM_swapImage.arguments; document.MM_sr=new Array; fo
28     if ((x=MM_findObj(a[i]))!=null){document.MM_sr[j++]=x; if(!x.oSrc
29 }
30 <!-->
31 </script>
```

(figure 5)

Continued ...





Developer Advisory

Step 5

In the table file, notice the HTML code for the table itself.

1. Copy all of the table code from the beginning tag `<table>` to the end tag `</table>` (see figure 6).
2. Paste the table HTML code into the library on the lines beneath the Macromedia functions that you pasted in an earlier step.

```
33
34 </head>
35
36 <body bgcolor="#FFFFFF" text="#000000" onload="MM_preloadImages('common/leftnavtop.gif','common/leftnavbottom.gif','common/leftnavmiddle.gif','common/leftnavright.gif','common/leftnavtop.gif','common/leftnavbottom.gif','common/leftnavmiddle.gif','common/leftnavright.gif')">
37 <table width="160" border="0" cellspacing="0" cellpadding="0">
38 <tr>
39 <td></td>
40 </tr>
41 <tr>
42 <td><a href="services/services.htm" onMouseOut="MM_swapImgRestore()" onMouseOver="MM_swapImgRestore()">Services</a></td>
43 </tr>
44 <tr>
45 <td><a href="methods/method.htm" onMouseOut="MM_swapImgRestore()" onMouseOver="MM_swapImgRestore()">Methods</a></td>
46 </tr>
47 <tr>
48 <td><a href="strategies/strategies.htm" onMouseOut="MM_swapImgRestore()" onMouseOver="MM_swapImgRestore()">Strategies</a></td>
49 </tr>
50 <tr>
51 <td><a href="toolsinfo2/toolsinfo.htm" onMouseOut="MM_swapImgRestore()" onMouseOver="MM_swapImgRestore()">Tools</a></td>
52 </tr>
53 <tr>
54 <td><a href="support/support.htm" onMouseOut="MM_swapImgRestore()" onMouseOver="MM_swapImgRestore()">Support</a></td>
55 </tr>
56 <tr>
57 <td><a href="http://itsweb5sit.state.ut.us/NASApp/edg/projects/projects.htm" onMouseOut="MM_swapImgRestore()" onMouseOver="MM_swapImgRestore()">Projects</a></td>
58 </tr>
59 <tr>
60 <td><a href="portfolio/portfolio.htm" onMouseOut="MM_swapImgRestore()" onMouseOver="MM_swapImgRestore()">Portfolio</a></td>
61 </tr>
62 <tr>
63 <td><a href="codelibrary/codelibrary.htm" onMouseOut="MM_swapImgRestore()" onMouseOver="MM_swapImgRestore()">Code Library</a></td>
64 </tr>
65 </table>
```

(figure 6)

Continued ...





Step 6

Notice that Dreamweaver staggers its HTML tags as it writes out code. It is good practice to write HTML this way because it makes the code easy to read and edit. For the library file, however, you will want to line up each row of HTML code from the table you pasted into the library (Step 5) along the left edge of the window.

1. Line up the HTML code along the left edge of the library window by deleting any spaces that come before the first tags on each line (see figure 7).

```
26 <table width="160" border="0" cellspacing="0" cellpadding="0">
27 <tr>
28 <td><a href="http://www.edg.utah.gov">
33 <tr>
34 <td><a href="methods/method.htm" onMouseOut="MM_swapImgRestore
35 </tr>
36 <tr>
37 <td><a href="strategies/strategies.htm" onMouseOut="MM_swapImgF
38 </tr>
39 <tr>
```

(figure 7)

Continued ...





Developer Advisory

Step 8

In this step, you will assign each row of the table code as a piece of the htmlcode variable for the `leftNav` function.

1. Add about five spaces and then the following code (see figure 9) to the beginning of each line of table code:

```
htmlcode+= ' '
```

2. Add the following (a single quote followed by a semicolon) to the end of each line of table code:

```
';
```

```
32 htmlcode+= ' <tr> ' ;
33 htmlcode+= ' <td><a href="http://www.edg.utah.gov"> ' ;
34 htmlcode+= ' </td></tr> ' ;
35 htmlcode+= ' <tr> ' ;
36 htmlcode+= ' <td><a href="services/services.htm" onmouseover="document.location=' ;
37 htmlcode+= ' </td></tr> ' ;
38 htmlcode+= ' <tr> ' ;
39 htmlcode+= ' <td><a href="methods/method.htm" onmouseover="document.location=' ;
40 htmlcode+= ' </td></tr> ' ;
41 htmlcode+= ' <tr> ' ;
42 htmlcode+= ' <td><a href="strategies/strategies.htm" onmouseover="document.location=' ;
43 htmlcode+= ' </td></tr> ' ;
44 htmlcode+= ' <tr> ' ;
45 htmlcode+= ' <td><a href="toolsinfo2/toolsinfo.htm" onmouseover="document.location=' ;
46 htmlcode+= ' </td></tr> ' ;
47 htmlcode+= ' <tr> ' ;
48 htmlcode+= ' <td><a href="support/support.htm" onmouseover="document.location=' ;
49 htmlcode+= ' </td></tr> ' ;
50 htmlcode+= ' <tr> ' ;
51 htmlcode+= ' <td><a href="http://itsweb5sit.state.ut.us/NJ" onmouseover="document.location=' ;
52 htmlcode+= ' </td></tr> ' ;
```

(figure 9)

Continued ...





Step 9

Notice that if you have rollovers in your table, the lines of table code might contain references to the Macromedia functions mentioned earlier. If you don't see any Macromedia functions referenced in the code, skip this step.

The single quote marks used in these functions will interfere with the leftNav function unless they are commented out using a single back-slash (\) symbol.

1. Place a back-slash (\) in front of every single-quote (') **except** for the first and last single quotes of each line of table code. **Do not** accidentally comment out the single quotes you just added in Step 8. An easy way to do this step is by using Dreamweaver's Search and Replace, but only replace one at a time so you don't accidentally comment out the first and last single-quotes of each line.

Important Note: *Make sure that any links to files or images within the Macromedia functions are absolute links.*

Note: *If you comment out the single-quotes correctly, you will notice that in Dreamweaver 4.0, the `htmlcode+=` at the beginning of each line, and the semicolon (;) at the end of each line, turn black while everything in between turns green. If, on any line of the code, there are any black characters between the `htmlcode+=` and the semicolon, or if the semicolon appears green, then one of the single quotes (') was not commented out correctly.*

Incidentally, you could make the entire table one variable, or use the document.write function without a variable. Setting the code up in the manner this tutorial demonstrates, however, makes it very easy to read and edit the HTML. It is much easier for site content administrators to work with this method than with many others.

```
26 function leftNav() {
27     var htmlcode = '';
28
29
30
31     htmlcode+= '<table width='';
32     htmlcode+= '<tr>;
33     htmlcode+= '<td><a href='';
34     htmlcode+= '</tr>;
```

(figure 10)

Continued ...





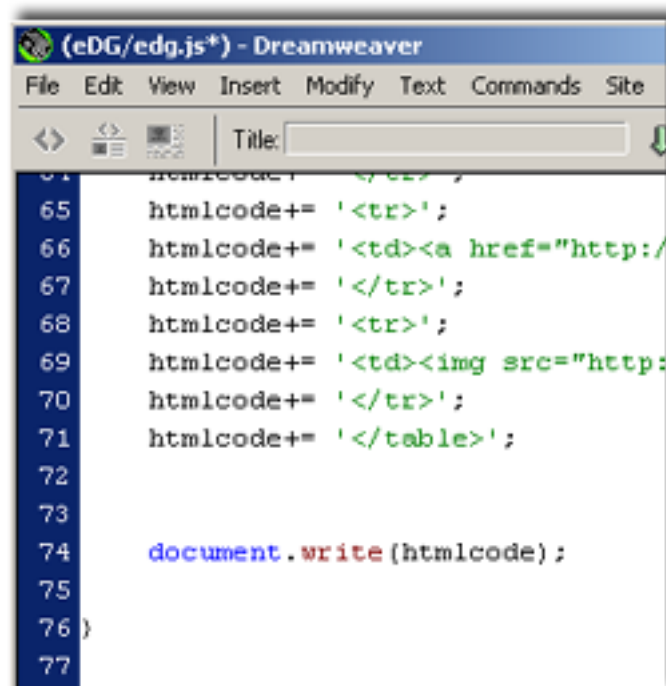
Step 10

Now that the `htmlcode` variable has been defined, we need to tell the function to write it out.

1. After the very last line of table code, skip about three lines and add the following code (see figure 11):

```
document.write(htmlcode);  
  
}
```

Step 11



(figure 11)

Continued ...





Step 11

The function is now complete and should work once it is published. If you used rollover images in the original table, however, you should add one last piece.

1. Go back to the HTML table file and look for the Macromedia function “`MM_preloadImages`.” Macromedia usually defines it between the `<head>` and `</head>` tags, and calls it in the `<body>` tag.

If the `MM_preloadImages` function does not exist, you can skip the rest of this step. If it does, continue reading.

Where the function is called (probably in the `<body>` tag), notice that the `MM_preloadImages` parameters include all of your rollover images.

2. Copy the function, including all of the parameters, and paste it into the blank lines above “`document.write(htmlcode);`” that you added (Step 10) below the last line of table code in your library file.
3. Make sure to add a semicolon to the end of the parameter (after the end parenthesis).
4. Add absolute links to the images referenced in the function.
5. Make sure that you included `MM_preloadImages` when you pasted the Macromedia functions into the library (step 4).

This will make sure that your new function will call the preload function making your rollover buttons look better.

```
68      htmlcode+= '<tr>';
69      htmlcode+= '<td></script>
```

4. In the body, call the include file (in our case, `leftNav`) where you want your include to appear. For example:

```
<script language="javascript">leftNav();</script>
```

If you published your JavaScript library, you should now be able to test your new function.

After verifying that your include works correctly, you can implement it on all of your pages. If you ever make changes to the include function, all of the pages that use it will be updated. This will save you time because you won't need to edit every single page that contains some common element.

Note: *The files used in this tutorial can be downloaded from the eDG site.*

Continued ...





```
1 <html>
2 <head>
3 <title>JavaScript Include Tutorial</title>
4 <meta http-equiv="Content-Type" content="text/html; charset=iso-8859-1">
5 <link rel="stylesheet" href="/wssdevsite2.css" type="text/css">
6
7 <script src="http://www.edg.utah.gov/edg.js" language="javascript"></script>
8
9 </head>
10
11
12
13 <body>|
14
15
16 <table width="650" border="0" cellspacing="0" cellpadding="0">
17   <tr valign="top">
18     <td colspan="2">
19       <script language="javascript">
20 iwHeaderfixed();
21 </script>
22     </td>
23   </tr>
24   <tr valign="top">
25     <td rowspan="4" width="160">
26       <script language="javascript">
27 leftNav();
28 </script>
29     </td>
30     <td width="335">&nbsp;</td>
```

(figure 13)

